APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,584	11/26/2001	Paul Michael Tiernan	21971	4748

24932	7590	08/05/2004

LAW OFFICE OF LAWRENCE E LAUBSCHER, JR
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ANNAPOLIS, MD 21403

EXAMINER
PHAM, TUAN

ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
 after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
 Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
 earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 November 2001</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
 closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-17</u> is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a)☐ All b)☐ Some * c)☐ None of:

 1.☐ Certified copies of the priority documents have been received.

 2.☐ Certified copies of the priority documents have been received in Application No. _____ .

 3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
 application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date <u>11/26/2001</u>.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Huang et al. (U.S. Patent No.: 6,724,891, hereinafter, "Huang") in view of Zhou (U.S.

Patent No.: 6,178,241).

   Regarding claim 1, Huang teaches a system for detecting line status of a

telephone terminal in parallel with a second communications terminal at a customer's

premise, the telephone and second terminal being connected to the Public Switched

Telephone Network (PSTN), said system comprising (see figure 2, telephone 200a,

second terminal 200b, telephone line 210 connect to PSTN):

   a DC isolation barrier isolating the PSTN and the telephone from the second

terminal (see figure 1B, isolation barrier 104, col.4, ln.23-42), and

      means in the isolation barrier to transfer an analogue representation of voltage

values received from the PSTN to a loop detection circuit (see figure 1A, col.2, ln.38-52,

col.4, ln.23-42).

   It should be noticed that Huang fails to clearly teach detection means in said loop

detection circuit to detect a transition in the analogue representations having a duration

greater than a selected value. However, Zhou teaches such features (see col.12, ln.20-67, Zhou teaches when an on-hook to off-hook transition occurs the duration is greater than 50ms/pulse) for a purpose of detecting on-hook or off-hook on telephone line.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of detection means in said loop detection circuit to detect a transition in the analogue representations having a duration greater than a selected value, as taught by Zhou, into view of Huang in order to maintain a certain voltage level on the telephone line when the off-hook occurs.

Regarding claim 2, Huang further teaches the system wherein said second terminal is a Data Access Array (DAA) for interfacing data transmission equipment with the PSTN (see col.2, ln.20-36).

Regarding claim 3, Huang further teaches the system wherein voltages from the PSTN are Tip and Ring voltages (see figure 2, col.4, ln.23-30).

Regarding claim 4, Huang further teaches the system wherein said loop detection circuit includes means to determine, from said analogue representation, polarity information respecting said Tip and Ring voltages in order to correctly orientate said line status (see col.9, ln.56-67, col.10, ln.1-10).

Regarding claim 5, Huang further teaches the system wherein said loop detection circuit includes means to detect a transition of said Tip voltage with respect to said Ring voltage (see col.9, ln.56-67, col.10, ln.1-10).

Regarding claim 6, Zhou further teaches the system wherein said detection means provides an indication of a change in line status of said parallel telephone when

said transition in the analogue representation has a duration greater than a selected

value (see col.12, ln.20-67, see explanation at claim 1 above).

Regarding claim 8, Zhou further teaches the system wherein said selected

value is programmable (see col.12, ln.20-40).

Regarding claim 9, Huang further teaches the system wherein an indication of a

change of state in line status of said parallel telephone indicates that said parallel

telephone has gone off-hook (see col.4, ln.23-62).

Regarding claim 10, Huang further teaches the system wherein said second

terminal is caused to go on-hook upon detection that said parallel telephone has gone

off-hook (see col.4, ln.23-62).

Regarding claims 11 and 14, Huang teaches a system and method for

detecting off-hook status of a telephone connected in parallel with a data transmission

terminal at a customer's premise, the telephone and the data transmission terminal

being connected to the Public Switched Telephone Network (PSTN), said system

comprising (see figure 2, telephone 200a, second terminal 200b, telephone line 210

connect to PSTN, col.4, ln.32-42)):

a DC isolation barrier isolating the PSTN and the telephone from the data

terminals connected in parallel (see figure 1B, isolation barrier 104, col.4, ln.23-42), and

means in the isolation barrier to generate an analogue representation of Tip and

Ring voltage values received from the PSTN (see col.9, ln.1-16, col.10, ln.38-54).

It should be noticed that Huang fails to clearly teach means to pass the analogue

representation to a downstream loop detection circuit, and detection means in said loop

detection circuit to detect a transition in the analogue representation having a duration greater than a selected value wherein a transition in the analogue representation having a duration greater than said selected value indicates that said telephone has gone off-hook. However, Zhou teaches such features (see col.1, ln.53-65, col.12, ln.20-67, Zhou teaches when an on-hook to off-hook transition occurs the duration is greater than 50ms/pulse) for a purpose of detecting on-hook or off-hook on telephone line.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of means to pass the analogue representation to a downstream loop detection circuit, and detection means in said loop detection circuit to detect a transition in the analogue representation having a duration greater than a selected value wherein a transition in the analogue representation having a duration greater than said selected value indicates that said telephone has gone off-hook, as taught by Zhou, into view of Huang in order to maintain a certain voltage level on the telephone line when the off-hook occurs.

Regarding claims 12 and 16, Zhou further teaches the system and method wherein said selected value is programmable (see col.12, ln.20-40).

Regarding claim 15, Zhou further teaches the method wherein a transition in the analogue representation having a duration greater than said selected value indicates that said telephone has gone off-hook (see col.12, ln.20-61, see explanation at claim 14).

Regarding claims 7, 13, and 17, Zhou differs from claims 7, 13, and 17 in that does not defined the selected value is 200 ms. However Zhou teaches the selected value is 50 ms, by changing the value of the selected value to the range as claimed would not involve any inventive feature since it is just a mater of selecting the value of the duration for a purpose of selecting the time when on-hook or off-hook on telephone line occurs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the use of selected value of Zhou by changing the value of duration to the range 200 ms in order to meet the characteristic of the particular time to get the telephone off-hook.

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Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In order to expedite the prosecution of this application, the applicants are also requested to consider the following references. Although Wilmot et al. (U.S. Patent No. 3,997,731), Embree et al. (U.S. Patent No. 6,169,762), Bijman et al. (U.S. Patent No. 6,590,973), and Ludeman (U.S. Patent No. 6,665,398) are not applied into this Office Action; they are also called to Applicants attention. They may be used in future Office Action(s). These references are also concerned for supporting the system and method for detecting an off-hook condition and an interface device providing electrical isolation.

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (703) 305-4987. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (703) 305-4708 and

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Any response to this action should be mailed to:

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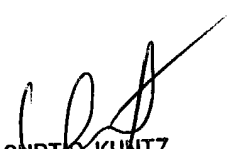Washington, D.C. 20231

Or faxed to: (703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington VA, Sixth Floor (Receptionist, tel. No. 703-305-4700).

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Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 2643
August 6, 2004
Examiner

Tuan Pham

CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600